

INTRODUCTION TO GIS



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WHAT IS GIS?

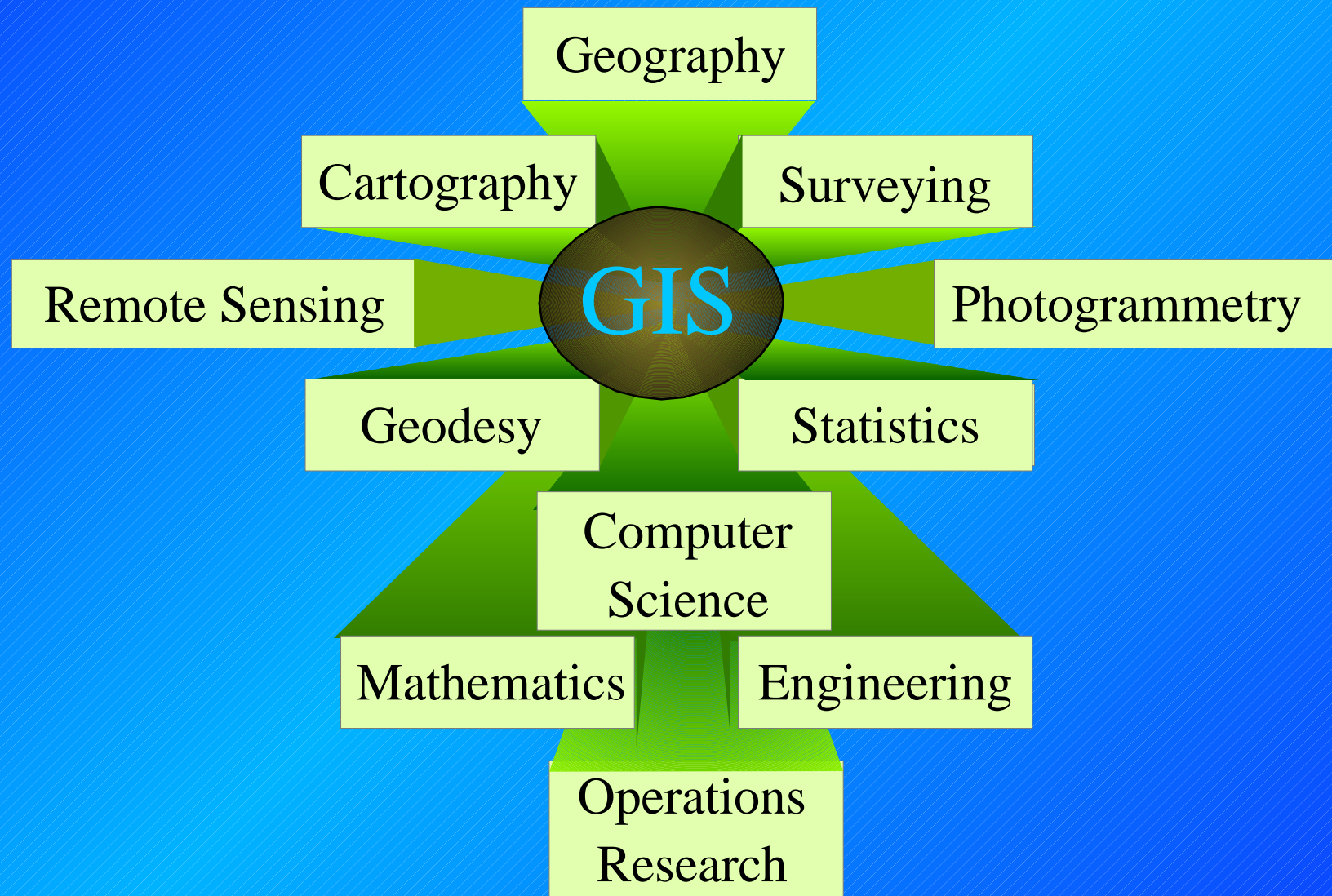
A system of hardware, software, data, people, organizations and institutional arrangements for collecting, storing, analyzing and disseminating georeferenced information.

ENVIRONMENTAL APPLICATIONS

Explore environmental questions related to:

- Location
 - Where is facility X? Where are the wetlands?
- Patterns
 - What is the distribution of high blood lead levels in children?
- Relationships
 - What is the spatial relationship between facility X, human population density, and prevailing winds?
- Trends
 - How many acres of wetlands have disappeared since 1980? Since 1990?
- Forecasting
 - What would happen if ...?

DISCIPLINES AND TECHNOLOGIES



GIS AS A SET OF INTEGRATED SUBSYSTEMS



The diagram illustrates GIS as a set of integrated subsystems. It features four rectangular boxes with a teal-to-black gradient, each containing white text. The boxes are labeled 'Data Processing' (top), 'Data Analysis' (left), 'Information Use' (right), and 'Management' (bottom). These boxes are interconnected by a network of white lines: a central vertical line, a horizontal line connecting the left and right boxes, and diagonal lines connecting each box to the center. The background is dark teal with a large, faint, stylized 'A' shape and concentric circular lines.

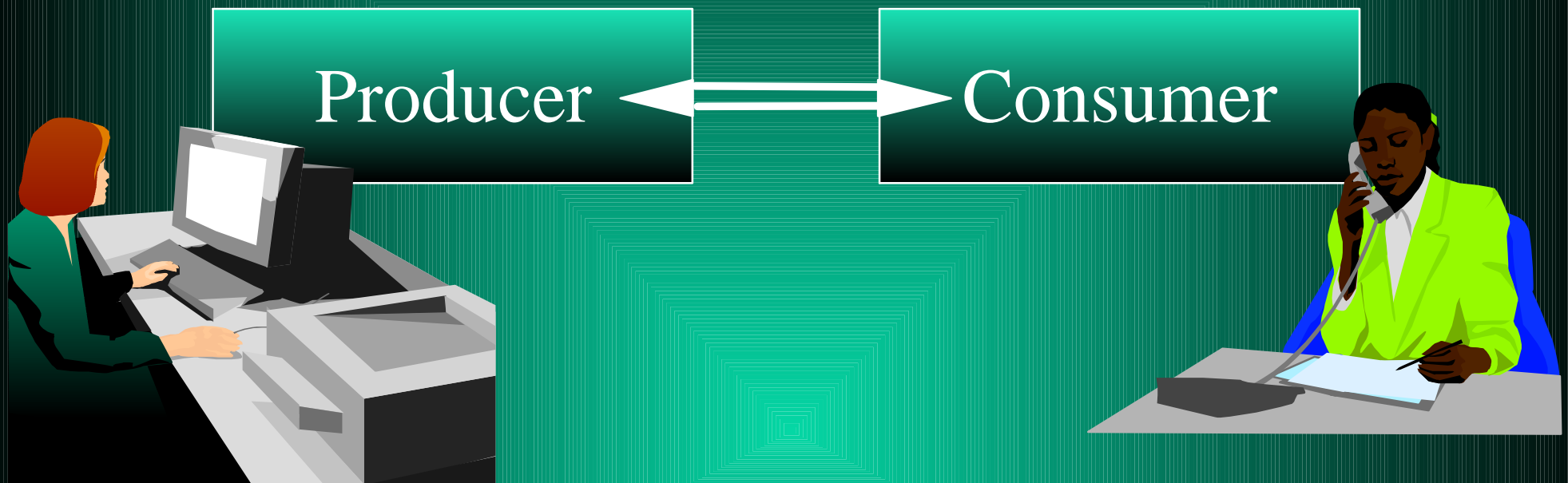
Data Processing

Data Analysis

Information Use

Management

GIS: INFORMATION USED IN A DECISION-MAKING PROCESS



- Problem-based
- Uses Primary and Secondary Data

GIS GLOSSARY

Some words you might hear in the course:

- Attribute
- Classification
- Comparability
- Completeness
- Contour
- Coordinates
- Grid
- Thematic
- Metadata
- Representativeness
- Vector